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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,597	10/02/2006	Sylvain Capouilliet	2085-101US	2936
25881 7590 10/22/2007 EPSTEIN DRANGEL BAZERMAN & JAMES, LLP 60 EAST 42ND STREET SUITE 820 NEW YORK, NY 10165			EXAMINER BOLDA, ERIC L	
			ART UNIT 3663	PAPER NUMBER
			MAIL DATE 10/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/551,597

Applicant(s)

CAPOUILLIET ET AL.

Examiner

Eric Bolda

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/30/2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 5-10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-10 are assumed to depend from claim 1.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 7 and 8, and claims 2-6 and 9-10 depending on them, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "optical signal processor device (14) intended to be fitted to means (10) for optically transmitting an information-carrying signal.." which creates doubt as to whether the means (10) for optically transmitting an information-carrying signal actually is part of the invention. Similar language in claims 7 and 8 creates doubt as to whether the means (10) for optically transmitting an information-carrying signal actually is part of the invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Liang (US 6493133). Liang discloses in Fig. 3 an optical signal processor device, connected to optical fibers (101a) for optical transmitting an information-carrying signal.

The device comprises

- filters (F1) and (F2) configured to suppress Rayleigh backscattering signals and pass other signals (including pump signals)
- optical fiber (propagation medium) (302)
- circulators (301a) and (301b) (divertor means for the back-propagated signals)

With regard to claim 2, the divertor means comprise two circulators (301a) and (301b) disposed at one of the points of connection to the optical fiber (101a).

With regard to claim 3, the entire unit consisting of (302), (303), (306), (307) and (F1), (F2) comprises the optical function module between the two circulators.

With regard to claim 4, the optical function module comprises the optical regenerator (amplifier) (306).

With regard to claim 5, the signal discrimination means comprises a band-pass filter (F1) (9th col. lines 50-59).

With regard to claim 9, the optical transmission means are optical fibers.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang as applied to claims 1-5 above, and further in view of Inoue et al. (US 6,867,907).

With regard to claims 6-7, Liang does not specifically teach that the signal discrimination means is a Bragg grating fiber. However, Inoue et al. teaches that a (reflecting filter) is a fiber Bragg grating (3rd col. lines 27-39). It would have been obvious to one skilled in the art (e. g. an optical engineer) to try a fiber Bragg grating for each of the filters since they are well-known elements used in fiber optic communication systems.

With regard to claim 8, demultiplexers are taught in Fig. 4, (21).

With regard to claim 10, Liang does not teach a distributed Raman amplification system. However, Inoue teaches (entire patent) a distributed Raman amplification system. It would have been obvious to one skilled in the art (e. g. an optical engineer) to insert the optical signal processor device of Liang, in the distributed Raman

amplification system of Inoue for the the purpose of transmitting signals over long distances.

Information Disclosure Statement

8. The information disclosure statement filed on Sept. 30, 2005 has been considered by the Examiner.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Tanigawa et al., Evans et al, Torii et al, Yam, Islam et la, Casaccia et al, Fludger et al, Tanaka et al, Christodoulides et al, Park et al, and Meli et al.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Bolda whose telephone number is 571-272-8104. The examiner can normally be reached on M-F from 8:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Jack Keith, can be reached on 571-272-6878. Please note the fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Eric Bolda". The signature is written in a cursive, slightly slanted style.

Eric Bolda